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Case Report

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Effect of Siddha Medicine Kadukkai Mathirai in Urakari vatham (Non-Alcoholic Fatty Liver disease) Associated with Obesity – A Case Report

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Abstract

Background

Non-Alcoholic Fatty Liver Disease (NAFLD) is a common metabolic liver disorder characterized by excessive fat accumulation in hepatocytes in individuals who consume little or no alcohol. It is closely associated with obesity, insulin resistance, dyslipidemia, and sedentary lifestyle. In Siddha medicine, Non-Alcoholic Fatty Liver Disease termed as urakari vatham, occurs due to derangement of vatham and accumulation of kabam in liver affecting liver function. Conventional management mainly focuses on lifestyle modification with limited pharmacological options. Siddha medicine offers a holistic approach in managing metabolic disorders through herbal and herbo- mineral formulations.

Objective

To Evaluate the therapeutic efficacy of Kadukkai Mathirai, a traditional Siddha formulation in a patient with Urakari vatham (NAFLD) associated with obesity.

Case study

A 33-year-old obese female (BMI 30.7) presented with fatigue, anorexia, constipation, and right upper quadrant discomfort. Biochemical evaluation revealed elevated alanine transaminase levels, and ultrasonography confirmed Grade II fatty liver. The patient was treated with the Siddha formulation Kadukkai Mathirai for 90 days. Following treatment, there was a marked improvement in clinical symptoms. Her BMI decreased from 30.7 to 27.9, and follow-up ultrasonography indicated resolution of hepatic steatosis. Additionally, all biochemical parameters returned to within normal limits.

Keywords: Urakari vatham, NAFLD, Siddha medicine, Kadukkai Mathirai, hepatoprotective, obesity.

1. Introduction

Non-Alcoholic Fatty Liver Disease (NAFLD) is the most prevalent chronic liver disease worldwide. Asia being a large, heterogeneous area with substantial variation in socioeconomic status and prevalence of obesity, diabetes mellitus, hypertension, and metabolic diseases, it has an increasing prevalence of NAFLD with poor outcomes including hepatocellular carcinoma and death [(1)]. Non-alcoholic fatty liver disease (NAFLD) consists of steatosisand non-alcoholic steatohepatitis (NASH). Steatosis is the accumulation of fat in the liver, and steatohepatitis is a condition with inflammation [(1)].

NAFLD is considered as a hepatic manifestation of the 'metabolic syndrome' as it mostly associated with obesity, dyslipidemia, type 2 diabetes and hypertension. This includes spectrum of progressive liver disease ranging fatty infiltration alone (steatosis) to fatty infiltration with inflammation (NASH) and may progress to cirrhosis and primary liver cancer [(1)]

NAFLD affects about 25% of the global adult population ranging from 13.5 % in Africa to 31.8% in the Middle East. The overall global prevalence of NAFLD is estimated to be around 25.24% according to an analysis made with statistical approach [(12)].

NAFLD is emerging as an important cause of liver disease in India.

Epidemiological studies suggest **prevalence of NAFLD in and around 9%to 32% of general population in India** with higher prevalence in those with Overweight or obesity and those with Diabetes or prediabetes [(2)].

In Siddha, NAFLD is assigned as Urakari vatham[(10)].

Many conditions come under Urakari vatham (NAFLD) varying from simple steatosis to steatohepatitis.

This case report highlights the treatment effects of Siddha interventions in a patient with grade II NAFLD.

2. Case Report

2.1. Case Presentation

A 33-year-old married female from an urban area presented to the Siddha outpatient department with complaints of fatigue, loss of appetite, abdominal discomfort, constipation, abdominal distension, and irregular menstruation. She appeared tired and generally unwell at presentation. The symptoms had been persistent for the preceding five months. The patient was obese, with a body mass index (BMI) of 30.7 kg/m².

History of Present Illness

The patient reported no history of alcohol consumption. However, she had a sedentary lifestyle and irregular dietary habits. The symptoms gradually developed over a period of five months and were associated with decreased appetite, irregular bowel habits, and menstrual irregularities.

Past Medical History

There was no history of alcoholism, diabetes mellitus, hypertension, dyslipidemia, bronchial asthma, tuberculosis, or renal impairment. The patient had a history of irregular menstruation. No significant family history, previous surgical history, psychiatric illness, or other relevant medical conditions were reported.

Personal History

Diet: Mixed diet
Appetite: Reduced
Sleep: Normal
Bowel habits: Irregular, associated with constipation

2.2. Clinical Findings

2.2.1. General examination:

On examination, the patient was conscious, oriented, and hemodynamically stable. Her pulse rate was 76 beats/min, respiratory rate was 17 breaths/min, and blood pressure was 110/80 mmHg. Body temperature was within normal limits.

The patient weighed 71 kg and had a height of 153 cm, corresponding to a BMI of 30.7 kg/m². General physical examination revealed no evidence of pallor, icterus, cyanosis, clubbing, lymphadenopathy, or pedal edema.

2.2.2. Systemic examination

In systemic examination, There was No abnormal clinical findings for cardiovascular and respiratory systems were observed on examination.

Her abdomen was distended due to fat and was normally moving with respiration.

On palpation,

Dull sounds were recorded during the percussion on the right lumbar region, andbowel sounds were normal on auscultation.

The patient consulted for these complaints with an allopathic physician 5 months backand she treated with antacids and laxatives to control the abdominal distension and constipation.

During this period patient was not recovered completely and due to the reoccurrence of symptoms seek here for Siddha treatment.

She was presently not on any medication whilethe Siddha intervention was ongoing.

2.3. Diagnosis

The patient was referred to a sonologist for ultrasonography of the whole abdomen, and the patient was found to be having gradeII fatty liver (Fig. 1a.).

No other abnormal sonographic finding was reported.

The patient was thus diagnosed with grade II NAFLD with obesity.

The Siddha diagnosis was Urakari vatham (Non-alcoholic Fatty liver disease), associated with Athithoola Noi (obesity).

2.4. Intervention

The patient was given Siddha medication KADUKKAI MATHIRAI for 90 days.

All the nterventions are presented in Table 1.

2.5. Diet

No specific diet or exercise schedule was given to the patient during the treatment period of two months.

3. Timeline of treatment:

The patient had treatment for three months. The timeline of the treatment is presented in Table 2.

4. Results

4.1. Observations

The patient was observed for improvement in symptoms related to NAFLD (Urakari vatham) on the four-point grading system (none, mild, moderate, and severe). Details of the recorded observations are presented in table 3.

4.3. Patient perspective

The patient was improved symptomatically by improvement in her digestion, appetite, bowel irregularity, body tiredness, and also have some body weight reduction. After three months of the treatment, the patient was feeling good, and actively doing her daily activities.

5. Effect on biochemical parameters

Biochemical parameters were assessed before starting the treatment and after three months of treatment ,all the data's were presented in Table 5.

After three months of Siddha interventions, significant improvement was observed in all the laboratory parameters, and they were in the normal range. However, the effect was more pronounced on Aspartate transaminase, Hemoglobin,

6. Ultrasonography of the whole abdomen (USG)

Before treatment, the Liver was Normal in size and shows diffuse increase in ehotexture.

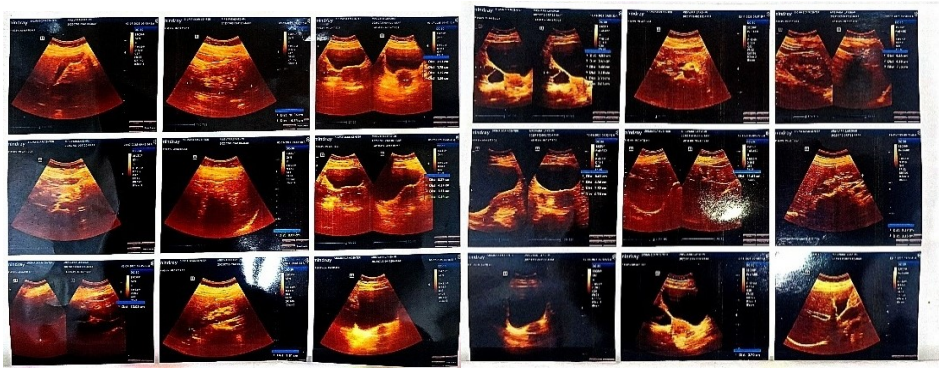
No evidence of focal lesion is seen

No intra hepatic biliary radical dilatation seen

Portal and hepatic veins appear normal, (Fig. 1a).

After three months of treatment, the liver was normal in size and shows uniform in echo texture. so, there was a complete remission of the lesion in the liver parenchyma. (Fig. 1b).

Before treatment **After treatment**



F ig 1. a Fig 1.b

7. Discussion

Fatty liver is commonly encountered in routine clinical practice. The majority of the cases do not suffer much, but some may progress to steatosis, steatohepatitis, and fibrosis. In some cases, it may develop hepatocellular carcinoma. Fatty liver is the common cause of the liver dysfunction, and compared to alcoholic fatty liver, few cases of NAFLD seem to develop chronic liver disease. In this study, we have treated a non-alcoholic, obese patient who had grade II fatty liver. According to Siddha, udal uzhaipinmai (overeating and sedentary lifestyle) is responsible for the vitiation of Kabam and vatham, which are the main Dosha involved in the pathogenesis of Athi thoolam (obesity). Our practice shows that persons with vitiated Kapha and vatha (fat) are prone to develop fatty liver and altered lipid profiles.

The ingredients of Kadukkai mathirai[11];

1.Annabethi chendhooram
2.Kadukkai thol (*Terminalia chebula*)
3.Milagu (*Piper nigrum*)
4.Karisalai (*Eclipta alba*)

Terminalia chebula have an Anti-oxidant, Hepatoprotective [9]Anti-inflammatory activity, Anti hyperlipidemic[6] and also have anti-obesity activity [4],

Piper nigrum have a lipid peroxidase inhibitor activity, Hepatoprotective [8], Anti-oxidant and Anti-inflammatoryactivity [5], and Eclypta alba has Hepatoprotective, Antioxidant and Anti-hyper lipidemic activities [7]. Annabethi has anti-oxidant activity.

And so, most of the ingridients of kadukkai mathirai has Hepatoprotective, Anti-oxidant and anti-inflammatory activities.

The patient was Treated initially with purgation with Moolakudori thailam 15 ml od with hot water (hs) for 3 days and then advised to take an oil bath with chukku thailam for one day followed by intake of Kadukkai mathirai - 1 (500mg) BD with hot water, and then observed within a few days of initiating the treatment, which probably improved biochemical parameters related to liver functions and lipid metabolism.

Further, sonographic evidence, showed a reduction in fat deposited in the liver and periportal area.

These findings highlight the usefulness of prescribed treatment in managing obesity induced non-alcoholic fatty liver conditions.

Table 1 Therapeutic intervention

Therapetic regimen	Duration	Drug	Dose and frequency	Route of administration
One	Day 1to 3	Moolakudara thailam	15 ml od at hs.	oral
Two	Day 4	Chukku thailam	60 ml.	External (oilbath)
Three	Day 4 to 90	Kadukkai mathirai	1 (500mg) twice a day.	oral

Table 2 Timeline of the treatment

Health event	Timeline
First USG of the abdomen and diagnosis of the grade 2 fatty liver disease	03.07.2025
Approach to the siddha treatment	07.07.2025
Assessment and examination were done. The treatment regimen first started.	21.07.2025
Assessment of followup usg abdomen was advised	12.11.2025

Table 3 Observation of signs and symptoms related to liver and obesity

Parameter	Day 1	Day 15	Day 45	Day 90
Liver diasese related signs and symptoms				
Abdominal discomfort	Moderate	Moderate	Moderate	Mild
Nausea and vomiting	mild	mild	nil	Nil
Loss of appetite	severe	Moderate	moderate	Nil
Constipation	severe	severe	moderate	Mild
Fatigue	moderate	moderate	moderate	Mild

Table 4 Height, weight and BMI

Parameter	Day 1	Day 15	Day 45	Day 90
Height	153 cm	153 cm	153 cm	154 cm
Weight	71 kg	70.4 kg	68.2 kg	65 kg
BMI	30.3	30.1	29.1	27.9

Table 5 Effect of treatment on biochemical parameters

Parameter	Before Treatment	After Treatment
LFT		
SGOT	43 IU/L	13 IU/L
SGPT	35 IU/L	12 IU/L
CBC		
Hemoglobin	12 gm/dl	13.6 gm/dl
RBC count	4.68 million/cu mm	4.96 million/cu mm
PCV	35.5 %	41 %

Conclusion

On the basis of the result, we can conclude that siddha interventions used in present case have shown a significant effect on management of non-alcoholic fatty liver disease. The results observed in this case are encouraging and further well-designed clinical trials may be carried out to test the efficacy of these interventions in similar conditions.

Informed consent

Informed consent for the publication of the data was taken from the patient.

Funding sources

Nil

Abbreviations

NAFLD–non-alcoholic fatty liver disease
NASH – non-alcoholic steatohepatitis
BMI – Body mass index
USG – Ultrosonography.

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